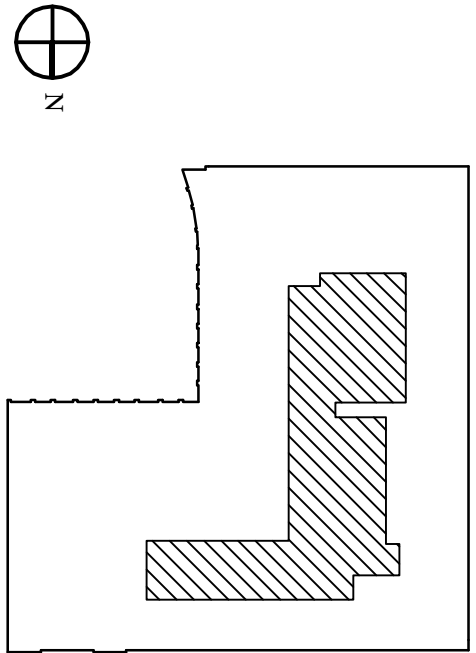


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| MARK | DATE | DESCRIPTION |
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[illegible]

| GRAPHIC SCALE | |
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| BUILDING NO. BUILDING CODE | BUILDING | | CONTRACTORS | | | | | |
|-------------------------------|----------------------------|--|--------------|--|---|-----------------------------|----------|-----------|
| | NAME | STREET CITY/ST/ZIP | CONSTR. CON. | CONSTR. CON. | CONS. WORK | AE/CONS. NO. AE/TASK NO. | | |
| | | | | | | | SUB. A/E | PRIME A/E |
| | | | | | | | | |
| M001066Z | ROBERT A. YOUNG FID. BLDG. | 1222 SPRUCE STREET ST. LOUIS, MO. 63103 | | TEAM FOUR ARCHITECTS, INC. WILLIAM TAO & ASSOCIATES | 65869404YD0001 67 MODIFICATION NO. 3 | | | |

| | |
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| TITLE | RAY ARRA MECHANICAL |
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| DESCRIPTION | WIND / PV PACKAGE |
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|-------------|-----------------|
| PROJECT NO. | 11M000020 |
| GSA PM | DENISE RYERKIEK |

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| SUBMISSION | FINAL SUBMITTAL 100% |
| SUB. DATE | 7/01/2010 |

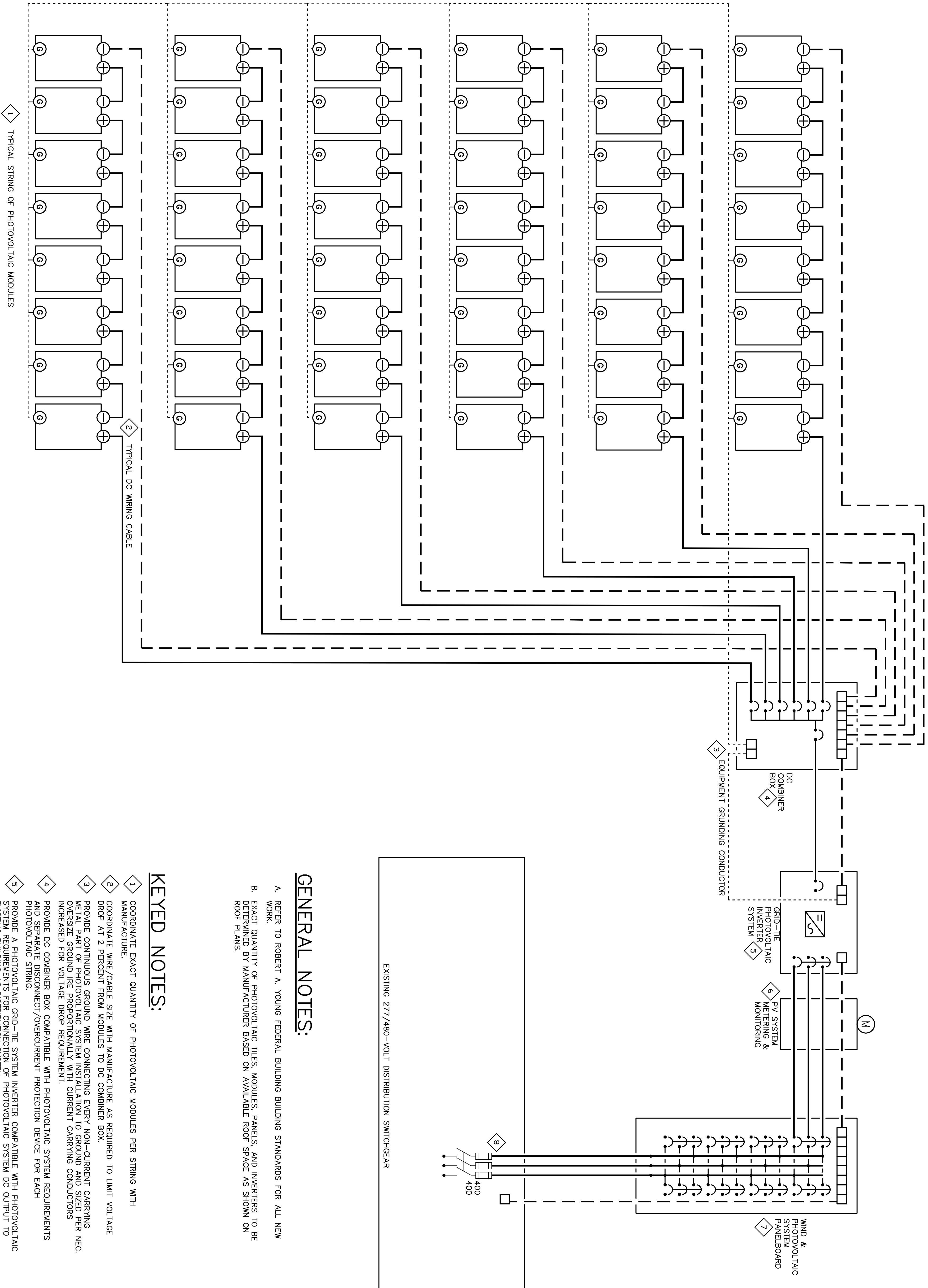
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| DRAWING TITLE | ELECTRICAL ONE-LINE |
| FILE NAME | EP-602-IM000090 |

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| DRAWN BY | ABH | DATE DRAWN: 6/7/2011 |
| FLOOR NO. | NA | |

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| CHECKED BY | XXX | SHEET SIZE: 30 |
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DRAWING NO. **EP 0**

SHEET 6 OF



GENERAL NOTES:

- A. REFER TO ROBERT A. YOUNG FEDERAL BUILDING STANDARDS FOR ALL NEW WORK.
- B. EXACT QUANTITY OF PHOTOVOLTAIC TILES, MODULES, PANELS, AND INVERTERS TO BE DETERMINED BY MANUFACTURER BASED ON AVAILABLE ROOF SPACE AS SHOWN ON ROOF PLANS.

KEYED NOTES:

- 1 COORDINATE EXACT QUANTITY OF PHOTOVOLTAIC MODULES PER STRING WITH MANUFACTURER.
- 2 COORDINATE WIRE/CABLE SIZE WITH MANUFACTURER AS REQUIRED TO LIMIT VOLTAGE DROP AT 2 PERCENT FROM MODULES TO DC COMBINER BOX.
- 3 PROVIDE GROUNDING SCHEME WITH CONNECTING EVERY NON-CURRENT CARRYING OVERSIZED CONDUIT PROPORTIONALLY WITH CURRENT CARRYING CAPACITY. NEC INCREASED FOR VOLTAGE DROP REQUIREMENT.
- 4 PROVIDE DC COMBINER BOX COMPATIBLE WITH PHOTOVOLTAIC SYSTEM REQUIREMENTS AND SEPARATE DISCONNECT/OVERCURRENT PROTECTION DEVICE FOR EACH PHOTOVOLTAIC STRING.
- 5 PROVIDE SYSTEMS, SUCH AS THE SYSTEM MASTER, COMPATIBLE WITH PHOTOVOLTAIC SYSTEM REQUIREMENTS FOR CONNECTION OF PHOTOVOLTAIC SYSTEM DC OUTPUT TO EXISTING BUILDING AC DISTRIBUTION SYSTEM.
- 6 PROVIDE WIND AND PHOTOVOLTAIC SYSTEM METERING EQUIPMENT WITH WEB SERVER AND CONNECTION TO GSM LAN IN ACCORDANCE WITH GSM 11 POLICIES TO MONITOR THE OUTPUT OF EACH WIND OR PHOTOVOLTAIC SYSTEM.
- 7 PROVIDE 270/480 VOLT, 3-PHASE, 4-WIRE, SURFACE MOUNTED, 400-AMPERE PHOTOVOLTAIC INVERTER OUTPUT TO PHOTOVOLTAIC BUS PROVIDE PROPERLY SIZED BREAKERS AND WIRES IN CONDUIT AS REQUIRED FOR FULL RATED OUTPUT OF EACH INVERTER.
- 8 400-AMPERE FUSED SWITCH IN EXISTING SWITCHGEAR WITH 2-SETS OF (4)3/0, (1)3/2 IN 2 CONDUITS TO NEW PV/INCOMING PANELBOARD.

1 TYPICAL PHOTOVOLTAIC SYSTEM WIRING DIAGRAM